OHIO CULTIVATOR.

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OHIO CULTIVATOR.

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EDITOR AND PROPRIETOR.

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Address M. B. BATEHAM, Columbus, O.

Now is the Time.

We hope our friends, and the friends of agriculture in Ohio, will not forget that this is *just the time* for them to make efforts to increase the circulation of the Cultivator. Don't be discouraged if many seem stupid and indifferent—try others, and especially younger men. We owe you many thanks for what has been done; but much yet remains to be accomplished. ☞Back numbers supplied to new subscribers.

☞ *Post Masters*, will of course oblige us by remitting subscriptions (at our expense) that may be handed them.

The Way to do it!

The following is an extract of a letter from a subscriber in Clermont county, on sending a dozen or so of new names for our list:

"I mounted my horse one day last week, and started off with something less than rail-road speed, to visit some of my neighbors, and see what I could do for the cause of Agriculture.

"Well sir, I soon found so much prejudice and ignorance that I began to think I should have dull business; but sir, I commenced digging and subsoiling around some of the old stalks, until I saw they began to prick up their ears; then with the aid of considerable argument and persuasion I gained 3 or 4 "hard cases" which gave me courage to persevere, and I now send you the result, hoping to be able to forward another batch before long."

☞*Change of Premiums.* The claims for premiums have been so numerous already, that our supply of single volumes of the Genesee Farmer is exhausted. We have 100 copies left of the *bound* double volumes mentioned in our prospectus, which we shall continue to give to those entitled to them.—They cannot go by mail.

The Second Volume of this paper, is now ready, neatly done up in printed covers and sent as premiums to those entitled to it: also for sale at 75 cts.

Volumes 1 and 2, bound together, also ready, price 1,75.

Caution!—We advise all persons not to pay subscriptions for this paper to strangers calling themselves agents, unless they can shown a certificate of agency signed by the editor, and of recent date. We have reason to believe there are impostors at work in various parts of the state.

Extra nmbers of this paper, for gratuitous distribution will be sent to all who desire them—applications must be free of postage.

☞We send a copy of our paper to each member of the Legislature, as usual, (gratis) during the session.

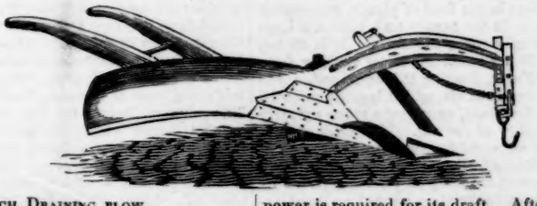
(*More about the construction of drains in our next.*)

Draining Plows.

In this country, where the cost of labor is so high, in comparison with that of land, and where a lack of capital is one of the greatest hindrances of improvement, it is in vain to expect that farmers generally will attempt any efficient system of Drainage unless some means can be devised for performing the work with a less expenditure of human labor than is done in the countries of Europe, where labor is cheap, and land is dear. Then, too, this digging in a ditch, with a spade or shovel is a kind of labor that is entirely unsuited to the taste of American workmen. They are willing to chop, to plow, or to mow, and are a match for any other countrymen at these occupations; but when you come to the *spade* and the *ditch*, none but a 'son of the sod,' or his next door neighbor, can or will, be of any service.

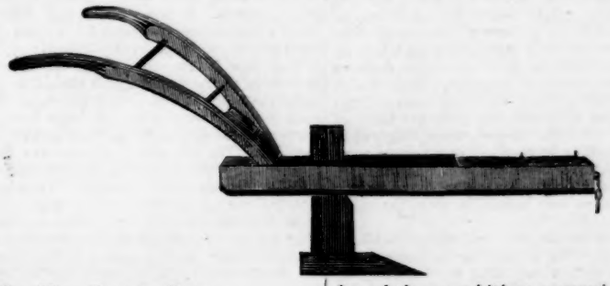
In what way, then, can the farmers of Ohio contrive to improve their lands by drainage, at the least expense of money and labor? To answer this question, let us look at the character of our wet lands, and we shall see that nearly all of them are of a soft mucky nature, free from stones, and much more easily wrought than the majority of the wet soils of Europe. It is obvious therefore, that a large portion of the work can be performed with plows, as soon as a mederate share of Yankee ingenuity shall have been bestowed on the construction of plows for this purpose; and this will, no doubt be soon done if it is found that a demand exists for such implements. If an objection is urged on the score of expense—we answer, there are many farms in Ohio whose owners would be benefitted many times the cost, by the use of a good draining plow; and there are hundreds of neighborhoods where farmers would club together to puchase such an implement, as soon as they came to understand its use and value.

We give below representations of two plows designed for draining, copied from Colman's European Agriculture.



The Scotch Draining plow.

This is a very large, and somewhat expensive impliment. It is designed to be moved by eight or ten horses (or oxen) where the soil will allow of the use of teams, and by a windlass with ropes and pulleys where teams cannot be used. We have no description of its dimensions further than that it is of great strength and "mammoth size" and so constructed as to open a furrow at one operation, in the most perfect manner to the depth of 18 to 22 inches. In clayey soils, (free from stones, of course,) it takes out a furrow slice of a wedge form the full depth of the drain, and lays it bodily on one side about one foot from the margin. For this purpose the mould board is made of great length, and great power is required for its draft. After the plow has done its work, men folllow with spades and deepen the furrow where necessry, and put in the tile or stones if designed to be covered. By passing a plow of this description two or three times in one furrow, a very large ditch can be made at comparatively little expense, and the work of "ditching" would much better conform to the taste of American farmers. What ingenious mechanic in Ohio will get up the best draining plow, for the improvements of the thousands of acres of wet prairie lands in our state? And what land owners, or agricultural societies will offer a liberal premium, or compensating price, for an implement of this kind? We shall expect an answer to this iuquiry within the present year.



The Mole Draining Plow.

This is more simple in its construction, than the preceding, and very different in its design and mode of operation. It is only useful in tenaceous clay soils, that are free from stones, and where the amount of water to be carried off is not large. It is called the mole plow bacause it makes a hole or tunnel under ground, like the Mole, without opening any furrow on the surface. It requires to be made very strong, and from 6 to 8 horses are necessary for using it. The shank or coulter is broad, and strong, with a sharp edge; the sole or 'mole' consists of a round piece of iron, about 3 inches in diameter, a little flattened at the bottom, pointed at the forward end, and about 16 or 18 inches in length. The depth is graduated by changing the position of the shank where it passes through the beam. On drawing it through the ground it leaves a round opening in the clayey subsoil through which the water passes off, usually into drains of a larger size to which this kind are made tributary.

On Draining Lands,

As an important means of Improvement.

(*Continued from last No., page* 2.)

Before entering upon the subject of the best mode of constructing drains for the improvement of wet lands, we deem it advisable to give one or two further extracts from Coleman, of a general nature, calculated to impart a knowledge of the *principles* upon which the art of draining is conducted:

"The Philosophy of Draining.—The drainage of land is of such vast importance, that, my remarks on the subject have been much extended, I may safely longer claim the indulgence of my reader. It may be safely

laid down as an established principle, that in order to the successful cultivation of the soil, the cultivator must have, as far as can be acquired, the command of the water by which that soil is affected. I have already said that wetness may be ascribed to two causes; the first, arising from what may be called *perpetual springs* in the soil, which, of course, are more or less effected by the rain which falls, but whose origin may be sometimes traced to a considerable distance from the ground, which is covered or saturated by them; and secondly by rain falling directly upon the field. The former can be remedied only by cutting off the spring or the channel in which its waters flow. The latter evil can be remedied only by a system of drainage, so frequent and so formed and laid, as to convey the water away in the shortest possible time. I call it an evil; but in the main, the rain which falls is, of course, an immense good — a great and powerful instrument of vegetation, without which no vegetation could prosper, or even survive. It becomes an evil only when it becomes stagnant. The effects of stagnant water in land are destructive to vegetation; or rather, under certain conditions, it may produce even a greater luxuriance of vegetation, but the plants produced in a very wet soil are unpalatable, innutritious, and insubstantial.— Animals fed upon them always lose condition, and the manure of animals so fed is almost worthless. I saw this strikingly illustrated in the magnificent park of the Duke of Bedford, at Woburn Abby. Here there were many spots where the grass was luxuriant and abundant, on account of their excessive dampness, and which were entirely neglected both by the sheep and the deer; but wherever these places, once wet, had been thoroughly drained, they became the favorite resorts of these animals, and were fed as closely as possible. I have witnessed similar results in many other cases.

Water is an element in the food of plants, composing, in some instances, as in the turnip and potato, a large proportion of their substance; the former it is stated, containing nearly 90 per cent., the latter varying from 70 to 80 per cent. Water, filtering through a soil, opens its pores to the admission of air, which is most essential to the growth of the plant, or perhaps more properly speaking, to the fertility of the soil. Humboldt observed that argillaceous soils and humus deprived the air of its oxygen. He satisfactorily ascertained that earth taken from the mines at Salzburg only became fertile after having been exposed to the atmosphere for a considerable length of time. These observations established the necessity of the presence of oxygen in the interstices of the soil, or, as he then said, and as may still be maintained, the utility of a previous oxidation of the soil.— All our agricultural facts, indeed, confirm this view of the necessity of air in the interstices of the soil that is destined for the growth of vegetables. When by ploughing very deeply, for example, we bring up a portion of the subsoil into the arable layer, in order to increase its thickness, we always lessen the fertility of the ground for a time: in spite of the action of manures, and of any treatment we may adopt, a certain time must elapse before the subsoil can produce an advantageous effect; it is absolutely necessary that it have been exposed to the atmospheric influences; and it is then only that deep ploughing, which gives the arable layer a greater thickness, pays completely for the expense it has occasioned.

Water contributes, in the next place, when filtering gradually through the soil, to disolve the manures, and prepare them to assist in the growth of plants — in some cases, for the elements of these manures to be taken up by the plants. But water in too great abundance destroys these manures, and carries them away. Rain water, falling upon the surface, when the temperature of the air is higher than that of the soil, contributes to increase this temperature of the soil. Water, when stagnant in a soil renders it difficult to be worked, impedes the sowing or planting; often destroyes the seed and the crop; occasions it to become poached or inaccessible to animals; and in many other ways may be said to make the cultivation of such soils hopeless.

The rain water which falls upon land may be detained by two circumstances — the first by the impervious nature of the upper soil, which may be an adhesive and strong clay, through which the rain cannot percolate; the second by an impervious or indurated subsoil, either of clay or of hard pan, which holds fast the water when it reaches it, and consequently the upper portion becomes saturated or flooded. In respect to the former the adhesive clay, though there have been some failures, yet there are many remarkable instances, where, by a system of under-draining and subsoil-ploughing, the hardest soils have been opened and rendered comparatively dry and friable. When a ditch or drain has been dug, the tenacity of the neighboring soil has been loosened, and the drying of the soil in the hot sun of summer has, under such circumstances, caused it to crack in various directions, and, these fissures being once opened, channels for the trickling of water have been formed; others have followed from contiguity, and these adhesive soils, by a course of cultivation, have been loosened to a condition of unlooked-for dryness and fineness. Where the wetness of the soil has been occasioned by a hard and impervious subsoil, this evil has found no other effectual remedy than in deep draining, and thorough breaking up of this hard layer by the subsoil plough. The stratum below is often found pervious to the water, which makes for itself a ready exit, when it once reaches it.

The removal of water from the land is, then, in all cases, indispensable to a successful cultivation. Where it proceeds from permanent springs, they must be cut off or led away by a drain which shall directly reach them. There are very few lands which would not be benefited by draining. Wherever a spot is discovered in a field, where the water is accustomed to lodge, or which, from the coarseness or character of the herbage growing upon it, indicates the presence of water, we may feel sure that there the operations of draining are required. In the next place, it is desirable that the wetness arising from rain should be removed as soon as practicable. All the advantage which plants derive from rain are obtained from its immediate passage through the soil. Whenever its passage is arrested, and the water becomes stagnant, its presence is injurious, excepting to plants which are, like rice, for example, of an acquatic, or, as it may be termed, an amphibious character.

The Process of Draining.—In looking at a field or piece of land, which is proposed to be drained, the first thing to be ascertained is, what fall can be had for removing the water. A fall of one in two hundred is stated, by practical men, to be the extreme on one side; but it is desirable to get, if possible, one in a hudred.— With such an inclination, the drains are more likely to keep clear from sediment. The next step to be taken is, to lay out and form a main ditch or drain, into which all the small drains shall empty themselves, and the water be carried off. This, of course must be in the lower part of the land, and it is generally advised to let it remain open, that the mouths of the small drains may be observed and watched. Where left open, as at the model farm of Lord Ducie, there the inclination of the sides is so easy that they are cultivated to the water's edge. It is advised, in other cases, to let the side drains empty into a common main drain, which is to be covered; and this main drain is to empty itself into an open ditch.— The principal reason for having all the underground parallel drains empty themselves into the main, and through that into the ditch, instead of each emptying itself into the ditch, is, that while, in the latter case, a hundred mouths would require to be kept open and clear of rubbish, in the former only one has to be attended to; and also that, during the summer months, some of the parallel drains would become dry, and allow the entrance of moles and rats, which would soon stop them up; but that the quantity of water which always issues from a main drain would forbid their entrance, and thus hinder them from injuring it or the others.— Where the bottom of the drain, however, is formed with broken stones, there is no danger from this circumstance; and where the pipe drains of only one inch bore are used, they do not admit of the entrance of vermin. On Mr. Smith's plan, however, the main drains are covered as well as the side drains, and the entrance or outlet of the main drain may be protected by an iron grating, or a foot or two broken stone laid down at the end. It is advised that the main drain should be sunk six inches lower than the side drains; but where pipes are used, the side drains may enter directly into the main drains, the pipes being made with a hole in the side, for the express purpose. It has been found quite effectual, in some cases, to lay two pipes for a main drain, side by side; but it would seem most desirable to have a pipe of a large bore for the main drain, and of a sufficient size to receive all the water which should be emptied into it from the side drains. Such pipes, at Mr. Stirling's, near Falkirk, were of a very large bore, and made in three parts, so as exactly to fit each other when brought together. The advantage of a concave or circular bottom for the water to flow in, in preference to a flat sole, must be obvious at first thought. Tiles have been constructed with a circular bottom, like a horse-shoe set upon its front edge, and a flat cover to rest upon it; but I can see no advantage which this has over a pipe; unless it might be that, by the removal of the cover, the seat of any obstruction might be ascertained without lifting the whole.

It is often found necessary to make what are called *submain drains*, which of course communicate with the main drain. This must depend upon the nature of the ground, and where these submains are made on the side of a hill, they are best obliquely, crossing the small drains diagonally, and thus giving an impulse to the water received into them. It is advised, in all cases, to make the parallel drains, which connect with the main or submain, straight, whether running on level land, or on a side hill; it is deemed best that no small or parallel drain should ever exceed two hundred yards in length, without emptying into a main or a submain drain. The distance at which the drains should be placed apart may vary with the nature of the soil, from a rod to forty or sixty feet.

The mode of covering these drains is various. Where the drains are filled with broken stones, it is advised to lay upon the top of the stones an inverted sod, and then return the dirt which has been taken out. Where a pipe or tile and sole are used, the same advice may be given. In adhesive or clayey soils, it is deemed quite objectionable to return the clay, and ram it in closely upon the pipe. It has been deemed important, by some persons, that alternate pipes of a large and small bore should be used, so that the small pipes may enter the larger ones, and that there should be no interruption of contiguity between them. In some cases, rings of clay have been formed, into which the ends of the two pipes might enter, so as to close the interstice, and retain the pipes upon a level. This is is not, however, deemed necessary. Where the bottom is hard, and the pipes carefully placed, there is no danger, afterwards, of their getting, if the term may be allowed, misfitted; in cases where the bottom is sandy or loose, more pains must be taken to prevent this, which is easily done by an experienced and careful drainer.

On the Construction of Chimneys--again.

It seems to me that Messrs. Canfield and Root, have not fully answered the inquiries of "A. G. P." on page 163 of Vol. 2, Ohio Cultivator, respecting the "construction of Chimneys;" nor do I think they have done justice to the subject.

The importance of a good draught in a chimney, upon the "comforts of home," not only in respect to the disagreeable effects of smoke upon the eyes and health, but also upon the temper and disposition of all the inmates of the house, and more especially upon that most important part of the household the Wife, induces me to go more fully into the subject, than they seem to have done.

The principle upon which the draught in a chimney is produced, I am pursuaded, is but imperfectly understood; and the laws which govern it, still less so. Mr. Canfield states that "the air which is used in combustion is rarified, and being lighter than cold air, the cold air rushes in below and *drives it upward*"! And the Editor of the British Encyclopedia says, "that the whole mystery of curing smoky chimneys, consists in finding out and removing the accidental causes, which prevent the heated smoke from being *forced up the chimney by the pressure of the cool, and therefore heavier air, of the room*"!

A chimney may be considered a tube, either vertical, or but slightly differing from a vertical position; at the lower extremity of which, air is heated by a fire. The air which has become heated, expands, and being then specifically lighter than the surrounding air, rises and passes out at the top; its place being supplied by the air pressing in from the space adjacent to the lower opening, to occupy the place which the heated air had just left; by this means an upward current of air is produced, which carries with it the smoke and vapor, proceeding from the burning materials.

The force with which a mass of air that has been heated, will tend to rise, is equal to the difference between its own weight, and the weight of an equal mass of the same air before it was heated. And from the law of the dilatation of elastic fluids, this force is in proportion to the quantity of heat which the air receives. This force therefore will be the greatest just over the fire, and will gradually diminish as the column ascends, both from the loss of heat, and by the friction against the sides of the chimney. ☞ Consequently, the draught of a chimney depends upon the elastic force of the air, as it escapes from *the top of the chimney*, produced by the excess of temperature which the ascending column of heated air retains *at that point*.

It will occur to the recollection of, perhaps, every one, that when a fire is first kindled in a cold chimney it is very difficult to get the smoke to ascend; that it is as apt to come out into the room, as to go up the chimney; but as the fire increases, the upward current increases, and after the fire has attained a certain amount of heat, the chimney will draw well. Now if the flue of the chimney should be so large that the fire of ordinary size will not heat the air to the top of the chimney, the smoke will ascend within the chimney until it has lost all its heat, and will there become stationary; and any accumulation of smoke in the fire place will be discharged into the room. By enlarging the fire and producing more heat, the column of air within the chimney may become heated all the way to the top of the chimney, when an upward current will be produced.

The principal defect in the construction of the majority of chimneys, is, that they are too large. The next fault is placing the throat too high above the fire; so that a part only of the air which passes into the throat becomes heated, and mixes with the heated air and thereby hastens the reduction of the temperature, and retards the upward motion of the current.

The celebrated Count Rumford has published a book, in which he gives directions for remedying the defects of chimneys, by contracting the space at the throat, and bringing the throat lower, and nearer the fire. However valuable his work may have been, it would have been still more so, if he had given a plan and directions for constructing a perfect chimney. It would not be right perhaps to charge him with being the cause of all the smoky chimneys that have been built, or the scolding wives that have lived since his book was published; but, nevertheless, it is true that he has been the cause of a great many of them. All who have attempted to follow his directions, have assumed that his plan of a corrected

chimney, was a model upon which to build a new one; and have built the throat and fire place correctly, but have at the same time copied the other original fault of making the flue too large, by making an offset just above the throat from 2½ to 4 times the size of the aperture of the throat, and perhaps gradually enlarging it from thence to the top!

It would seem that it has heretofore been supposed, that the draught of a chimney was produced at the throat, near the fire; such is the inference obtained from Count Rumford's plan of correcting a smoky chimney. And Mr. Canfield says, that "if a chimney is so constructed that the warm air and smoke, *has room to get out of the way of the cold air which is driving it upward, no smoke will be driven out into the room.*"

But according to the laws of the expansion of elastic fluids, in order to construct a perfect chimney it would seem to be necessary that the size of the fire, the size of the flue, and the height of the chimney, as well as the amount of friction, should all be well considered and taken into consideration. Count Rumford states, as the result of numerous experiments, that the flue at the throat should not exceed 4 inches in width, and of the length of the back of the fire place; and this size will determine the capacity of the chimney from thence to the top; for, either enlargement or contraction of this size, will be injurious to the draught, because if it is true, that the draught is produced at the top of the chimney, by the excess of temperature which the air in the chimney retains at that point, above the surrounding air, it is clear, that it is an object of the greatest importance to preserve as much heat as possible within the flue; but on the other hand, we must avoid making the flue so small as that the friction will retard the ascent of the warm air.

In order to correct a smoky chimney when the flue has been made too large for the size of the fire, it will be necessary to contract the size of the flue *at the top of the chimney*, as well as *at the bottom*, so that the fire will produce sufficient heat to warm the whole of the air in the flue of the chimney; in which case a draught cannot fail to be established. This method of correcting smoky chimneys, by contracting the flue at the top, has been extensively practiced, without, perhaps, comprehending the reason of its success.

If "A. G. P." will, after having made the throat of his chimneys to correspond with Count Rumford's directions, contract the aperture at the top to the same size, by taking down the chimney to the level of the roof, and gradually contracting the space by increasing the thickness of the sides, as the chimney is carried up, I have no doubt but he will have the satisfaction of preserving the beauty of his rooms, and the temper and disposition of his wife. D. L.

Mount Tabor, January 8, 1847.

Harrison County Agricultural Society.

Pursuant to a resolution of the Short Creek Township Agricultural Society, and also to a call published in the county papers, signed by "Many Farmers," a meeting was held in Georgetown, on the 12th of the 12th month, (December,) 1846, for the purpose of forming a County Agricultural Society for Harrison county.

The President called the house to order. The minutes of last meeting were read and accepted. The meeting then proceeded to ascertain the number of persons who were in favor of forming a County Society, and what sum of money they would raise—and found 33 persons would become members, and who pledged themselves to pay $51.

The meeting then considered and adopted the constitution and by-laws prepared for the purpose, and afterwards proceeded to the election of officers; whereupon John Hammond was elected President; George W. Scott, Vice President; John Heberling, Treasurer; Ezra Cattell, Secretary, and John Martin, Isaac Thomas, Elnathan Pettit, John Yost, and Abraham Holms, Managers.

On motion, *Resolved*, That the President and Secretary be directed to have the minutes, showing the organization of a County Society, published in the county papers, and to invite all our fellow citizens of Harrison county to unite with us in this effort for promoting the agricultural interests of the county—and to inform them that we wish this to be no sectional concern, but as its name indicates, a *County Society*, to hold its meetings and fairs at such places as may from time to ttme be thought most conducive to the improvement of the agriculture of the county, and most central to the majority of the members of the Society.

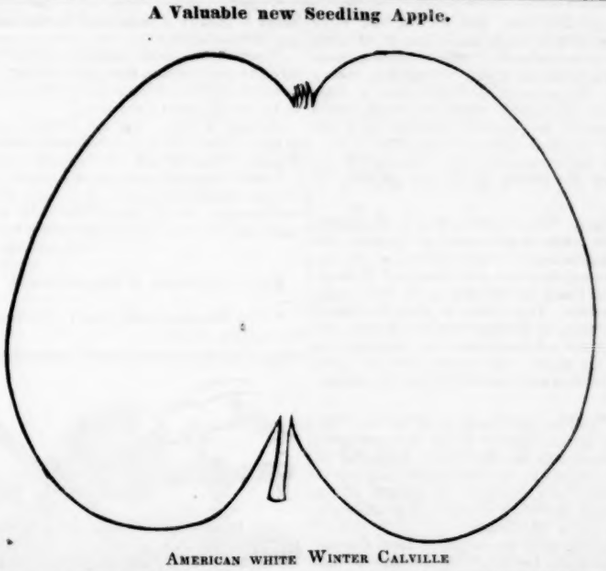
The Society then adjourned, to meet in Georgetown, on the second 7th day (Saturday,) of 2d month, (February,) 1847, at 10 o'clock, A. M., at which time our fellow citizens are respectfully invited to attend.

JOHN HAMMOND, *President.*

E. Cattell, *Secretary.*

Good Yield of Sweet Potatoes.—Mr. Benj. Locke, of French Grant, Scioto county, informs us that from a piece of land containing 4 rods less than three-quarters of an acre, he raised the past season 156 bushels of sweet potatoes, besides what were used by a family of 8 or 10 persons. The land was new and there were 33 stumps on the piece.

A Valuable new Seedling Apple.



American white Winter Calville

Friend Bateham:—I send you herewith, an outline and description of an apple which originated in this county, and which I have been cultivating on the recommendation of others, never having seen the fruit till a few days since, when I had an opportunity of making a drawing and specific description—It probably originated from seed of the Yellow Bellefleur, or the waxen apple known here as the "Gate." The following outline is taken from a medium size fruit—The tree is a great and constant bearer and the fruit may be worth a notice in your valuable paper.

This apple was first propagated from trees growing in the orchard of Mrs. Foster of La Fayette township, Coshocton County, Ohio, which she obtained by taking sprouts from the original tree, (now dead,) a seedling in the orchard of Mr. Daniel Miller, of the same township and county. The size is large, sometimes equaling that of the largest Yellow Bellefleur to which it bears some resemblance, as it does also to the Gate. The form is sometimes flat, but mostly round, or oblong, tapering somewhat to the eye, and with broad ribs extending from the stem to the eye. The skin is very thin and delicate, and of a glossy or waxen appearance. It is of a pale straw color without a blush—seeds very plump and oval, not near so long and pointed as the Yellow Bellflour and many other varieties—stem short, from half an inch to three quarters in length, rather small set in a deep, pointed and ribbed cavity. Calyx small and closed; in a moderate sized basin, shallower at one side than at the other. Flesh white, juicy and fine grained, of a very agreeable, and delicate sub-acid flavor—and although the fruit comes into eating early in November, it will keep till March or even April, retaining its flavor well. The tree is a strong, fine and upright grower in the nursery; the foliage peculiar, of a bright rich green and very glossy.

We have several other good seedlings of this county, of which I will give you a description hereafter, which I think well worthy of introducing, but before I do so to any great extent, I will submit specimens of the fruits to more experienced pomologists than myself, and obtain their opinions. Ohio can and will produce as good seedling fruits as any state in the Union.

She has already produced some of the best. There is no apple that I have yet seen, of its season, that is superior in flavor to the Cooper apple, which is said to be a seedling of this State. I ate some this fall which were sent me by the Rev. C. Springer near Zanesville, and if I am any judge of fruit, they merit the highest praise, and should have a place in every orchard in the country. I received grafts from Mr. Springer sometime since, but never saw or tasted the fruit till the time above mentioned.

Respectfully your
Friend, and humble servant,
JAS. MATHEWS.

Coshocton O Dec. 14, 1846.

Ohio Apples.

We find the following notices of Ohio Fruit in the January number of Downing's Horticulturist:

The "Cooper" Apple.—Our friend the Rev. C Springer of Meadow Farm, Ohio, has sent us for examination some interesting apples. We feel bound particularly to notice one variety, which is new to us, and is undoubtedly a fruit of great merit, This is labelled the "Cooper' apple.

The fruit is not known to us. It belongs to the class of autumn apples, of which that large and admirable fruit, the *Fall Pippin*, is the type. It has much the same flavor, and considerably resembles, in size and flavor, that fruit; yet it is a very distinct variety, remarkable not only for its excellent flavor, but for its lightness, its very small core and seeds, and the deep cavities at the eye and stalk.

We have made an accurate description and drawing of this noble fruit, which we shall publish hereafter.

Mr. Springer says in his letter, "by what ever name this apple may be known to pomologists, I consider it the best fall apple I have ever seen. The tree is a great bearer, and the fruit large and perfect. It is in great demand in our market. There are some who would buy a cartload of apples for the sake of getting a barrel of Coopers."

We have also a letter before us from the Hon. James Matthews of Coshocton, Ohio, full of interesting *pomological bits*, among which we note the following respecting this fruit:

"I do not believe that any apple cultivated in the Western States, excels the Cooper apple in flavor. You have doubtless seen the history of this variety, and placed it in your valuable collection. If not, I would especially recommend it to your attention.

Notwithstanding we have been favored by our correspondents west of the Alleghanies, most liberally with specimens of their apples, we have never seen the "Cooper" before, and trust that Mr. Matthews will favor us with the history of this really most excellent fruit.

We may add here, that parts of Ohio are undoubtedly in the highest degree favorable to the growth of the apple. Mr. Springer's letter contains the following item of proof, which will interest orchardists every where:

"I have gathered this year from one acre of ground, about one hundred and fifty barrels of the finest and fairest apples grown in this vicinity, and about one barrel of the White Doyenne pears. The latter are now (Nov. 9th) in perfection. I had one Rhode-Island Greening five inches in diameter, weighing eighteen ounces and three-quarters. My trees have never been trimmed, and I raise larger and better fruit than any one who trims his trees."

Roxbury Russet and Putnam Russet.—There has been a good deal of conjecture and inquiry about the indentity of these two fruits. A year or two ago the Putnam Russet was confidently claimed as a distinct western seedling. On the authority of Professor Kirtland, of Cleveland, we stated in our work on *Fruits*, that it had originated at Marietta. But discussion in the western agricultural papers, elicited the fact that beyond a doubt, the grafts of the so-called *Putnam Russet* were carried tothe west from New England, by the Putnam family, whence the fruit obtained th latter title.

Some cultivators of the west still doubted the indentity of these fruits—and we had ourselves doubts of their being the same.

We have however dompared the two, this autumn, pretty carefully. Specimens of the "Putnam Russet" have been obligingly sent us by A. H. Ernst, Esq., of Cincinnati, Mr. Elliot of Cleveland, and Rev. C. Springer of Meadow Farm, Ohio. The specimens from the latter gentleman were from the Putnam orchard itself.

The Roxbury or Boston Russet is an apple well known here, but to satisfy ourselves, while we were in Boston the past autumn, we gathered specimens from large bearing trees in Roxbury, and in Dorchester, to compare them with the Putnam Russet.

The result is, that we cannot see any distinction between the two fruits, and are bound to consider them indentically the same—that is, all the *Roxbury Russet*.

The "Putnam Russets," grown on rich soil at the west, are rather larger, and have shorter stalks than the Roxbu-

ry Russet usually exhibits here. But we find this apple unusually variable, both in shape and in length of stalk. Ordinary specimens are rather flat, with a somewhat slender stalk—fine specimens are slightly elongated, with a short thick stalk. We gathered specimens from a Roxbury Russet tree at Dorchester which in shape, stalk, flavor, &c., appeared to us precisely identical with the "Putnam Russets" we have received from Ohio.

In the nurseries last summer we could distinguish no difference between the leaves, wood, and growth, of these two sorts.

Apples From Ohio.—We are indebted to A. H. Ernst, of Cincinnatti, for quite a collection of Apples, the growth of that neighborhood—which reached us in excellent order. Among them we find *Kaighns' Spitzenbergh*, described by *Coxe*, the specimens of very large size, and good quality. This apple is very indifferent here, and Mr. Hancock, of Burlington, New Jersey, informs us that in his state, it has become so imperfect as to be abandoned by many cultivators. We are glad to see that, in the west, it has renewed its growth, and taken new lease.

"*Detroit Apple.*"—The specimens sent us by Mr. Ernst under this name, appears to us to correspond in every characteristic with the *Monstrous Bellflower* of Coxe. Mr. Ernst informs us that he should coincide in this opinion, but that Coxe describes the growth of the wood as strong, while he finds it slender. It is undoubtedly an old apple, and a Bellflower

"Newtown Spitzenbergh as we suppose it here, also extensively cultivated as the *Ox-eye*." A number of fine specimens were received with the foregoing memorandum. They proved to be our well known Dutch *Vandervere*—one of the finest apples when in perfection, that this country can boast. The color, bloom, and especially the flavor of this fruit are *unmistakeable*. We never saw any so large however as these specimens from Cincinnati—and like most western fruits they are rather less regular in form, and are deeply indented at the eye and stalk.

It is worth while to remark, by the way, that no apple is so secure at the present moment as the genuine *Newtown Spitzenburgh*. We do not know a *bearing* tree in this country, and if any of our readers can send us specimens of the fruit, we will consider it an especial favor.

Yellow Belle Fleur, *Pennock*, and *Winesap*, all correct, and of fine size and quality.

All's Russet, *Putnam Russet*, *White Pippin*, and several other unnamed sorts, completed the collection.

[Since the foregoing extracts were put in type, we have received the following note from Mr. Springer covering a letter from Mr. Downing, and which is annexed.—*Ed. Cult.*]

Mr. Bateham:—You will confer a favor by publishing the following extract from Mr. Downing's letter.—There are several fruit cultivators of my acquaintance who have manifested some interest to know whether the Putnam Russet, is identical with the Roxbury Russet—whether the Copper apple, is the Gravenstien or Watson's Dumpling,—and whether the Little Pearmain, of this vicinity, is the American Golden Russet, of Mr. Downing's book? With a view of settling these questions, I forwarded to Mr. D., specimens of these, and other fruit, not described by him, under the names current here, and the following is his reply, at my request.

By the way, I shall take occasion, here, to give my suffrage in favor of Mr. D's. work "On the Fruit and Fruit Trees of America," as the best production I have seen on the subject. His method of giving, first, the proper, and then the local names of the different varieties of fruits, will do much to banish that confusion of names which now greatly afflict the nurseries of the country, and will enable the purchaser to know what kind of fruit he is getting. If the work had no other merit than this, it would be sufficient to recommend it to the public patronage.

Yours &c.,
C. Springer.

Meadow Farm, O., Jan. 12, '47.

Letter from Mr. Downing.

Highland Gardens,
Newburgh, N. Y., Dec. 31, 1846,

Dear Sir:—Notwithstanding the box of fruit did not reach me till the beginning of this month, yet most of the specimens you had the kindness to send me, were in good order.

You will see a notice of the *Cooper Apple*, &c., rec'd from you, in the Jan. No. of the Horticulturist. I will now add a few remarks about the others.

"*Little Pearmain.*" This appears to be the *Sheep-nose* of Coxe, and the *American Golden Russet* of my work. The "*Seek-no-further*," also, strongly resembles my *Westfield-Seek-no-further*, and I presume it is the same.

(I ought to note here, that our apples undergo a considerable change in appearance, in being grown on your western soil. Mainly in the length of the stalk and depth of the cavity at both ends, which in your specimens is usually increased—i. e., the stalk is shorter and the basins deeper.)

The "*Cooper Apple*" is truly a noble fruit. It is most like our *Fall Pippin*; but quite distinct. It bears no resemblance to the *Gravestien*, which is a striped apple,* or to the *Watson's Dumpling!*

Putnam Russet, from the Putnam source, I was truly glad to see. It is, I think, undoubtedly our *Roxbury Russet*. The "*Never-fail*" is unknown to me.

I shall be greatly interested to hear further accounts of your seedling apples. Your soil and climate are so well adapted to the apple, that new varieties of high merit must undoubtedly arise with you.

With esteem, yours,
A. J. Downing.

Rev. C. Springer, *Meadow Farm, O.*

* The *Coopers* which grow in the sun are considerably striped.—C. S.

OHIO CULTIVATOR.

COLUMBUS, OHIO, JANUARY 15, 1847.

To Correspondents and Readers.

We must again apologise to our friends for seeming neglect in attending to their letters and communications. Nearly all of our time, for a week past, has been devoted to the compilation of that part of the report of the State Board of Agriculture embracing the returns from the counties. This must also be our excuse for any lack of editorial matter in this number.

The "First Anual Report of the Ohio State Board of Agriculture" is now in the hands of the printers. It is not known, as yet, what number of extra copies the Legislature will order to be printed; but we think a large number could be usefully distributed by the members, among their constituents, and that it will be found a very ecceptable document, although by no means as complete or useful as we hope to see these reports hereafter. There has not been time, as yet, for any action to be had on the suggestions of the Board in relation to a reduction of the number of the members of the Board, and paying their expenses.

Strange Weather.—Our readers in these parts hardly need be told that we have had the greatest variety and *quantity* of weather since our last. First remarkably warm, with drenching rains, producing disastrous floods, and *mud* of unknown depths—then, presto! cold enough to freeze the blood of a Laplander; the themometer down to 10 or 15 degrees below zero, and water and mud all congealed together. Now again it relents, and there is promise of a thaw, with perhaps rain. But we dare not trust in such promises any more.

Damages by the Flood.

The papers for a fortnight past have teemed with accounts of damages done by the freshet of Jan. 2 and 3d., throughout a great portion of Ohio, and one or two other states. Besides the loss of bridges, mill-dams and canal banks, the injuries sustained by farmers, especially in the great valleys, in the loss of fences and corn, is great beyond all precedent in Ohio. The Scioto river was higher than it was ever known before, and overflowed the br ad fertile bottoms to a very great extent, sweeping away hundreds of miles of fences, and thousands of acres of unhusked corn together with some sheep, hogs, and other farm stock. From a little below this city, to the vicinity of Chillicothe, comprising perhaps the greatest body of corn land in the state, the principal part of the past season's crop was standing in shocks on the ground, as it is fed in the stalk to fatting cattle during winter; consequently the loss to the farmers in this valley is much greater than elsewhere. We have seen no reliable estimates of the amount of damage sustained, but all agree that it is very great.

We welcome "D. L." back to our columns; our readers have not quite forgotten him.

A number of articles are necessarily deferred for our next.

"Valuable farm for Sale."—We invite attention to the advertisement under this head, on our last page. The farm is indeed a good one, and will be sold very low.

Counterfeit Detector.—Several counterfeit bills have been sent us in payment of subscriptions of late. We detect them by means of Goodman & Co's "Detector" published at Cincinnati—$1,50 per year.

Convention of Wool Growers.

To be held at Steubenville, O., Feb. 10th, 1847.

In our paper of Sept. 1st we published an account of a meeting of wool growers, many of them from this State, convened at Springfield, Mass., in August last, at which it was resolved that a general meeting of wool growers should be held at Steubenville on the 10th of next month, for the purpose of hearing a report from the committee appointed at that meeting, &c. The following letter has been sent to us by Messrs. Perkins & Brown, in reference to this subject:

M. B. Bateham, Esq.

Dear Sir—We write to ask you to stir up the Farmers all over the country to attend the Wool Growers' meeting at Steubenville, on the 2d Wednesday of February next, as much information will then be given as to the best manner of preparing wool for the market—the way to secure fair prices, regularly, and foreign competition for American wools—the state of manufacturing in the country generally, and the machinery by which *prices are manufactured yearly.*

The true course of farmers will be clearly pointed out; and we hope that all who have any interest in this growing trade will be on hand, as we will certainly tell them something new. We shall expect to meet you there without fail. We are preparing matter for a report that can hardly fail to give a deep interest to persons connected in any way with the wool trade. *We have no Saxony or Merino disputes to settle at that time.*

Respectfully, your friends,
Perkins & Brown,
of Akron, O.

Springfield, Mass., Dec. 30th, 1846.

Death by Hydrophobin.

The Lima (O.) Reporter announces the death of H. D. V. Williams, Esq., formerly Clerk of the Allen county Court, by that most awful of all diseases, hydrophobin. Mr. W. was bitten by a dog in October last. It was not supposed that the dog was rabid, but only cross, and the deceased had no suspicions of the dreadful malady until within a few days of his death. His sufferings are said to have been terrible.

We hear of a number of such cases every year in our dog-ridden State; and if there were no other reasons for adopting measures for reducing the number of these worse than useless animals, this alone should be quite sufficient. Of what value are the lives of ten thousand dogs, compared with the life of such a man as was Mr. Williams—or of the humblest citizen of Ohio?

Sheep vs. Dogs.

Mr. Bateham:—It is to be taken for granted that our legislators, are willing to adopt such measures as will accomplish the greatest amount of good to the greatest number of their constituents; and as the farming class is by far the most important, and unquestionably the most numerous portion of the inhabitants of the state of Ohio, it seems somewhat strange that more is not done to protect their interests, to reward their toil, or at least to render them more secure in the possession of their property. Year after year have petitions been presented to that honorable body, praying that something may be done for the protection of their flocks of sheep against the incursions so frequently committed by dogs. The people of this section of the state are waking up to their true interests in many branches of husbandry, and among the rest some attention is paid to the improvement of sheep, particularly in the quality of the wool. But few, however, are willing to incur the expense attendant upon such a praiseworthy enterprise, so long as an innumerable host of worthless dogs are permitted to prowl around their farms, committing depredations upon their flocks, the replacing of which requires a considerable expenditure both of time and money. Notwithstanding we have been so often repulsed in this matter, we are now circulating petitions asking that every dog owned or kept by any one family, shall be subjected to an annual

specific tax of not less than twenty five cents; and every additional one, not less than a dollar. We think if our legislature would grant this small favor, it would at least have the effect to lessen the number of useless dogs which so infest the community. We hope the farmers of Ohio will speak out upon this subject in tones that our legislature dare not disregard.

Our agricultural society formed but a short time since, now numbers nearly fifty members and is rapidly increasing.

CRAWFORD COUNTY.

January, 1847.

Notices of Publications.

THE RURAL REGISTER AND ALMANAC FOR 1847.—This is a neat little work of 150 pages; containing the usual almanac tables, and a great variety of interesting facts and instructions relating to farming, gardening, and household affairs; illustrated with numerous engravings, and well worth its trifling cost—25 cts. We would have preferred, however. that the senseless article on the moon and the weather were omitted; and that a less number of the selections had been made from English works.—For sale at Whiting & Huntington's, Columbus.

THE HERALD OF TRUTH,—a monthly periodical of 80 pages, edited by L. A. HINE, Cincinnati. This work takes the place of the "Journal & Review" several times noticed by us the past year. The character of Mr. Hine's writings is favorably known to a large number of our readers, and we heartily commend this work to their attention, as one that will richly compensate a *thinking mind* for its cost and perusal. We shall speak of this again. The terms are 25 cts. per number, or $3 per year;—2 copies for $5.

BALDWIN'S UNIVERSAL PRONOUNCING GAZETEER.—Third edition, with an appendix containing more than 10,000 additional names, and a map exhibiting the canals and railroads in the United States.—LINDSAY & BLACKISTON, *Philadelphia*.

This work has been before noticed in our columns, but we have recently had a visit from one of the authors, Dr. Thomas, and received from him a copy of the improved edition. No book could be more timely than this; for who is there that has dared of late to attempt to read aloud the intelligence contained in our ordinary newspapers, relating to our affairs with the south-western portions of this continent? Who, for instance, would venture to pronounce, before an intelligent company, such names as *Chihuahua*, *Guanaxuato*, *Zacatecas*, and a hundred other seeming jaw-breaking names with which our eyes, but not our ears, have become quite familiar of late? By the aid of this book, we shall find that there is no difficulty in pronouncing such names, *after we have learned how*.

Then, too, how important is such a work for the school teacher, in giving or hearing lessons in Geography; and more especially at this age, when the facilities of travel and intercourse render it almost indispensible for every one of common intelligence to be familiar with the names and leading features of all the principal countries, cities, &c., of the globe. The work is for sale at Whiting & Huntington's, Columbus.

THE AMERICAN HERD BOOK—BY L. F. ALLEN. We have a few copies of this work for sale at our office; and we invite gentlemen who admire fine cattle, and wish to obtain a work of real merit on this subject, to call and examine it. Besides pedigrees of the principal herds of Short Horn cattle in this country, it gives a spirited and concise history of English and American Short Horns, and remarks on the peculiarities and characteristics of the breed, with hints on management, breeding, &c.

Young Hogs for Pork.

In a former volume of this paper we published several articles recommending to farmers the selection of thrifty breeds of hogs, and making pork from pigs of 9 to 12 months old, instead of about twice that age, as is usual. We then gave a statement from Mr. Chs. Duffield, a celebrated pork packer of Cincinnati, and we now give an extract from a recent letter from that gentleman on the same subject. He says:

"I wish you would again urge in your paper the utility, practicability and *profit*, of marketing pigs at 9 or 1[illegible] months old—as small fat hogs, netting 150 to 2[illegible]0 lbs., are the only kind really suited for the English markets, and the most desirable for *many* of our own, and will bring as much per 100 lbs. as heavier hogs."

LADIES' DEPARTMENT.

The following excellent new song, from the pen of Mrs. SIGOURNEY, we find in the Colonization Herald. It is adapted to the grand old tune of "God Save the King," and is well suited for an agricultural festival:

God Save the Plough.

See,—how the shining share
Maketh earth's bosom fair,—
Crowning her brow,—
Pread in its furrow springs,
Health and repose it brings,
Treasure unknown to kings,
God save the plough.

Look to the warrior's blade,
While o'er the tented glade,
Hate breathes his vow,—
Strife its unsheathing wakes,
Love at its lightning quakes,
Weeping and wo it makes,
God save the plough.

Ships o'er the deep may ride,
Storms wreck their banner'd pride,
Waves whelm their prow,
But the well-loaded wain,
Garnereth the golden grain,
Gladdening the household train,
God save the plough.

Who are the truly great?
Minions of pomp and state,
Where the crowd bow,
Give us hard hands and free,
Culturers of field and tree,
Best friends of liberty,
God save the plough.

L. H. S.

Letter from Rosella.

INQUIRIES ABOUT MAKING "NICE GOOD SOAP," &c.

Mr. Editor, and Lady Contributors—I have never yet seen in the Ladies' department any thing in reference to one subject about which I should be happy to have the opinions of some good experienced housewives—like "A Virginian," for instance, as I am sure she must understand it—I mean the art of making SOAP—real good nice soap—such as nice old experienced farmers' wives know how to make. Now, will not some such one tell us "young folks" her method? Please to give us all the particulars—the kind, quality, and strength of the ley, quantity of lard, or other grease, the best time and mode of making, &c.

Then there is another subject about which I also wish to obtain information, and which may be of benefit to many others, especially when spring-time arrives, and that is, the best plan for destroying or driving away *bedbugs*. Who will give us a good, long, sensible lesson on this important department of housewifery. I have had the pleasure of reading the Ohio Cultivator two years, but not one word have I seen on this *sentimental* subject.

Our editor has given us the privilege of writing articles in his paper for our own benefit; then why not make free use of the opportunity for gaining and imparting instruction? He has promised, also, to "trim the rough edges off" our communications; but this is written in just my own common language, and I hope he will not alter it, for I prefer it should appear like what it really is, the language of a plain farmer's daughter.

ROSELLA.

Richland County, Jan., 1847.

***Our compliments to you, ROSELLA—and it gives us pleasure to renew your acquaintance. We *take* that remark about 'trimming communications.' and have very nearly complied with your request this time! We are sorry to say it, but to be frank, we have had a shade of doubt on our mind, as to the truth of the last clause of the closing sentence of your letter. Now what atonement can we offer that will procure for us pardon for this sin?

The following article in one of our exchanges, just come to hand, may serve as a partial answer to the foregoing. We hope, however, that its insertion will not prevent any one from complying with the request of Rosella.—ED.

Soap for Washing White Clothes.

EDITORS OF THE CULTIVATOR—I enclose you a recipe for making a washing soap, given to my wife, which she thinks is capital; and has no doubt it wil be found economical, both on the score of saving soap and the wear of clothes. It had been used by the friend who gave it to her. If it p oves what we think it will, every subscriber who uses it, can afford to subscribe for five copies of your paper and give them to his neighbors.

RECIPE.—1 gallon good soft soap,
1-2 gallon water,
1 ounce sal soda,
1 gill turpentine,

Mix cold; let it heat gently to a boil: then take it off, to cool, stirring frequently until it becomes hard

DIRECTIONS FOR USE.—To a four or five pail boiler, add a tea cup full of soap. The clothes want to be soaked over night, or slightly washed in the morning before boiling. Must not be boiled over 20 or 25 minutes; suds and rinse in hot soft water, with a little blueing; fig blue is preferable.

The suds, after boiling, is preferable to hard soap for washing calico.

If these directions are strictly adheared to, it will be, found that the washing is done with less labor and fuel the linen and cotton is of a purer white, and the damage by pounding and rubbing is avoided, rendering the garments much more durable.—*Alb. Cult.*

Preservation of Bacon.

MR. BATEHAM.—As the art of preserving bacon in a sweet sound state is an item of importance in domestic economy, perhaps the following will be found of value to some of the readers of the Cultivator. It is the plan which my father, and a number of acquantances have adopted for some years past with perfect success:

When the bacon is taken out of the tub or bunk for the purpose of being smoked, and while it is yet damp, dust the flesh part of the meat over with finely ground black pepper. By this method it may hang in the smoke house the whole summer with perfect safety, the pepper being so very poisonous and offensive to flies that they will not light on it to deposite their eggs.

R. *Jr.*

Zanesville, O.

In curing beef, a farmer says; 'I have used *saleratus* in place of *saltpetre*, and I never had better beef.

WOOD FUEL.—One cord of dry wood split fine will do more service in heating kettles in a furnace than three cords of coarse wood.

DAIRY FARMERS WANTED.—Mr. R. W. Stearns, in a letter from St. Marys, Mercer Co. O., says: "We have an excellent county here for grass. Cannot you send us some good farmers that would like to engage in the dairy business? I think this a very good place for that business; land can now be bought within 2 or 3 miles of the canal, at $2,50 per acre, and we can always have the choice of a northern or southern market, as we are in the centre between lake Erie and Cincinnati. There is no one engaged in the dairy business in a large way in the county. Our land is also good for most other kinds of farming; and this county is more healthy than most newly settled countries."

Remedies for Common Errors in Farming.

Substance of an Address delivered at the December meeting of the Rome and Union, (Lawrence Co.,) Farmers' Club, by the president, H. N. GILLET.

First and foremost, as soon as the forest is cleared off your land, see that every foot of ground not suitable for ordinary cultivation, as steep hill sides, rocky places, creek banks, ravines, fence rows, lanes, &c., are immediately seeded down with grass. This will prevent in a great measure the growth of bushes, briars, docks, thistles and other noxious weeds, and at the same time render the land useful by the production of hay or pasture, besides preventing the soil on hill sides from being washed away into creeks and rivers. It will also save your fences from being shaded with bushes and rotted with moisture—to say nothing of the gratification afforded to the eye, when contrasting the appearance of the farm, with those where the weeds and bushes are allowed to obtain possession.

Next see that every fence corner rests upon a good sized flat stone—even if you have to haul them five miles. A rail lasts but a few years when resting on the moist ground; and before the fence is half rotten two or three of the bottom rails will have decayed and sunk to the earth—the result, no doubt, as many will say, of having laid the fence in the *wrong time of the moon!*—but the same will never happen if the rails are laid on flat stones as before directed. In making rails, those from the centre of the cut should be split small and laid at the bottom of the fence, they being more durable than the out-side rails; and by making them small the fence will be more secure against small hogs, &c., without notching the rails. In laying the fence, place the largest ends of the rails forward; the rails will then be level and the fence look better than if laid without regard to this rule. In laying worm fences on hilly land, be careful to place the thickest edge of the rails on the upper side, or towards the hill, otherwise they will be liable to roll and the whole fence slide down the hill.

The almost universal practice of close cropping and shallow plowing our lands without the application of manure, is a sin that without atonement will punish us through life and be visited upon our children after us,

"unto the third and fourth generation." It is much easier to keep your soil rich, by manuring, deep plowing and a judicious rotation of crops, than to restore its fertility after having become worn out. I am aware, however, few if any of the members of this Club are justly chargeable with this sin, and therefore it is unnecessary for me to speak of the remedies, further than to remind you of the importance of saving and using all the manure that can be made on the farm—as the manure heap is the farmers best mine of wealth.

I have been much amused in my travels, at noticing the ingenuity displayed by the farmers in many parts of the country in the location and construction of their barns, stables, pigpens, cow yards, &c., where apparently much pains have been taken to locate them on a declivity or run, where the manure would be sure to be washed away so as not to make the owner any trouble by obstructing doorways, &c.; and I have never known but two instances during my residence in the county, where the proprietors had to remove their barns on account of the accumulation of manure!—Another one hauled large quantities of manure and threw it down the river bank, to rid his barn yard of the obstruction caused thereby!

Another error I have noticed in my travels is, the general neglect of the business of planting good orchards and fruit gardens. A few trees of inferior kinds of apples constituting the sole supply of fruit for the use of the family. But this, also, is not a common error among those whom I am now addressing.

The lack of general agricultural information, and of the emulation which is excited by agricultural societies, is no doubt the greatest cause of the lack of zeal in agricultural improvement throughout our county. If our farmers would generally take and read agricultural papers, or hear lectures or essays on agriculture and horticulture delivered by practical men well qualified to interest their hearers, we should certainly see a more general desire manifested for participating in the great work of improvement which is now going forward in many parts of this country and of Europe.

Let me beseech every farmer to make the experiment; to take an agricultural paper for one year, and then see if he does not find he has received the full worth of his money. and if so, let him subscribe again, and again; he will always find something new, valuable and interesting. I have been a constant subscriber to one, and most of the time to two agricultural papers for the past nine or ten years, besides contributing my mite towards the purchase of an agricultural library for our Club; and I can assure you I have derived ample return for all the money I have expended for these objects. One single idea, derived from an article in the Genesee Farmer, respecting the construction of a pronged hoe, has been worth more to me than the cost of the paper for several years, and all the time spent in reading it. Our best agricultural papers are now afforded at a very cheap rate—only costing 75 cts. or $1 per year; so that the man must be poor indeed who cannot afford the expense.

Brother farmers! what say you all, to having an agricultural society for our county? Can you, *will* you sustain one if organized? If so let us take the pledge and say it shall never die while we survive. If ten just such members as I could name among the Club, would take this pledge, there would be no mistake about its succes. All that is wanting is for a few men to unite and say *it shall succeed*, and success would be sure. Our county offers the best of inducements for a skilful husbandry. The iron works and the river commerce afford a sure and fair market for all our surplus products. The only trouble is, we have so little to sell. This fault is certainly not in the climate nor the soil. Then let us go to work and see where the fault does lie; let the members of this Club show to their neighbors in other parts of the county, that by improved cultivation they can produce more from a given space of land than has been or can be produced elsewhere in this region, with the same expense and labor. We have not yet began to test the capabilities of our soil when its management is directed by science and skill. Now let us begin in earnest to show the world what can be done. Let every member keep an exact account of the money and labor expended, per acre, on his crops of the coming season, with a precise description of the operations and their results; and your reports will no doubt be worthy of yourselves, and highly instructive to others.

On Feeding grain to Sheep.

Mr. Bateham:—I will give the result of my feeding grain to sheep in winter: In the winter of 1843–4, I kept about 200 sheep, and they were fed with a more liberal allowance of grain than is usual. In the spring their fleeces averaged 3¼ lbs. each of clean wool. Many of them were yearling and two years old; not more than half being full grown sheep. I sold 40 of the wethers, after shearing, for $50, or $1,25 each, while at the same time droviers were only paying 87½ to $1 for common sheep; so that I got 25 cts. a head more for my wethers in consequence of their being in good order. Some of the fleeces of the wethers weiged 5½ lbs. and I think they averaged full 1 lb. more than they would have done had the sheep not been fed on grain. I sold my wool that year for 38½ cts. per lb.; so that by adding the price of 1 lb. of wool to the extra price obtained for the sheep after shearing it will be seen that I gained 63½ cts. per head, as I conceive, by the use of grain. The flock did not consume much over a bushel of oats—worth only 25 cts. per bu.—per head; so that it was as good to me as selling my oats for 63½ cts. per bushel, and taking pay in sheep and wool.

I consider corn to be the best and cheapest grain for sheep. It sometimes scours them, but this can easily be remedied by mixing it with oats, or substituting the latter for a few days.

W. S. Thorn.

Washington Co. O., Jan. 1847.

Plowing in Green Crops as Manure.

We cannot better answer the enquiries of our correspondents on this subject, than by the following extracts from Johnston's Lectures on Agricultural Chemistry and Geology:

Of green manuring, or the application of vegetable matter in the green state.—By green manuring is meant the plowing in of green crops in their living state, or of green vegetables left or spread upon the land for the purpose.

1. We have seen in the preceding lecture how important air and water are to the decomposition of organic matter. Now green vegetable substances contain within themselves much water, undergo decomposition more readily, therefore, than such as have been dried, and are more immediately serviceable when mixed with the soil.

2. In the sap of plants also there generally exist certain compounds containing nitrogen, which not only det compose very readily themselves, but have the property of pursuading or inducing the elements of the other organic matters, with which they are in contact, to assume new forms or to enter new chemical combinations.---Hence, the sap of plants almost invariably undergoes more or less rapid docomposition even when preserved from the contact of both air and water. When this decomposition has once commenced in the sap it is gradually propagated to the woody fibre and to the other substances of which the mass of stems and roots of plants is composed. Hence, recent vegetable matter will undergo a comparatively rapid decomposition, even when buried to some depth beneath the soil---and the elements of which it consists will form new compounds more or less useful to living plants, in circumstances where dry and where many forms even of partially decomposed vegetable matter would undergo no change whatever.

3. Further---when green vegetable matter is allowed to decay in the open air, it is gradually resolved more or less completely into carbonic acid, which escapes into the air and is so far lost. But when buried beneath the surface, this formation of carbonic acid proceeds less rapidly, and other compounds, preparatory to the final resolution into carbonic acid and water, are produced in greater quantity and linger in the soil. Thus by burying vegetable substances in his land in their green state, the practical man actually saves a portion of the organic food of plants, which would so far otherwise run to waste.

4. Finally. Green vegetable substances, by exposure to the air, gradually give up a portion of the saline matter they contain to the showers of rain that fall. This more or less escapes and is lost. But if buried beneath the soil this saline matter is restored to the land, and where the green matter thus buried is in the state of a growing crop, both the organic and inorganic substances it contains are more equally diffused through the soil than they could be by any other known process.

On one or other of these principles depend nearly all the *special* advantages which are known to follow from green manuring and from the employment of green vegetable matter in the preparation of composts.

Important practical results obtained by green manuring.

By this explanation of the principles on which the efficacy of *green* manuring depends, does not fully illustrate the important practical results by which, in many localities, it is uniformly followed.

Let us glance at these results:

1. The plowing in of green vegetables on the spot where they have grown may be followed as a method of manuring and enriching *all* land---where other manures are less abundant. Growing plants bring up from beneath, as far as their roots extend, those substances which are useful to vegetation, and retain them in their leaves and stems. By plowing in the whole plant, we restore to the surface what had previously sunk to a greater or less depth, and thus make it more fertile than before the green crop was sown.

2. This manuring is performed with the least loss by the use of vegetables in the green state. By allowing them to decay in the open air, there is, as above stated, a loss of both organic and of inorganic matter---if they be converted into fermented (farm yard) manure, there is also a large loss, as we shall hereafter see; and the same is the case, if they are employed in feeding stock, with a view to their conversion into manure. *In no other form can the same crop convey to the soil an equal amount of enriching matter as in that of green leaves and stems.* Where the first object, therefore in the farmer's practice is, so to use his crops as to enrich his land, he will soonest effect it by plowing them in in the green state.

3. Another important result is, that the beneficial action is almost immediate. Green vegetables decompose rapidly, and thus the first crop which follows a green manuring is benefitted and encreased by it. But partly for this reason also the green manuring, if corn cropped land, if aided by no other manure, must generally be repeated every second year.

4. It is said that grain crops which succeed a green manuring are never laid, and that the produce in grain is greater in proportion to the straw, than when manured with fermented dung.

5. But it is deserving of seperate consideration, that green manuring is especially adapted for improving and enriching the soils which are poor in vegetable matter. The principles on which living plants draw a part, sometimes a large part, of their sustenance from the air have already been discussed, and I may presume that you sufficiently understand the principles and admit the fact. Living plants, then contain in their substance not only all they have drawn up from the soil, but also a great part of what they have drawn down from the air. Plow in these living plants, and you necessarily add to the soil more than was taken from it, in other words, you make it richer in organic matter. Repeat the process with a second crop and it bcomes richer still, and it would be difficult to define the limit beyond which the process could no further be carried.

Is there any soil then, in the ordiuary climates of Europe, which is beyond the reach of this improving process? Those only are so on which plants refuse to grow at all, or on which they grow so languidly as to extract from the air no more than is restored to it again by the natural decay of the organic matter which the soils already contain.

But for those plants which grow naturally upon the soil, agricultural skill may substitute others, which will increase more rapidly, and produce a larger quantity of green leaves and stems for the purpose of being buried in the soil. Hence, the selection of particular crops for the purpose of given manuring, those being obviously the fittest which in the given soil and climate grow most rapidly, or which produce the largest quantity of vegetable matter in the shortest time and at the smallest cost

1. *Spurry* Spergula Arvensis).—It is to poor dry sandy soils that green manuring has been found most signally brneficial, and for such soils no plant has been more lauded than spurry. It may either be sown in autumn on the corn stubble or after early potatoes, and plowed in in spring preparatory to the annual crop, or it may be used to replace the naked fallow, which is often hurtful to lands of so light a character. In the latter case, the first sowing may take place in March, the second in May, and the third in July—each crop being plowed in to the depth of three or four inches, and the new seed then sown and harrowed. When the third crop is plowed in, the land is ready for a crop of winter corn.

Von Voght states that by such treatment the worst shifting sands may be made to yield remunerative crops of rye—that the most worthless sands are more improved by it than those of a better natural quality—that the green manuring every other year not only nourishes sufficiently the alternate crops of rye, but gradually enriches the soil—and that it increases the effect of any other manure that may subsequently be put on. He adds, also that spurry produces often as much improvement if eaten off by cattle as if plowed in, and that when fed upon this plant, either green or in the state of hay, cows not only give more milk, but of a richer quality.

2. *White Lupins.*—In Italy, and in the south of France, the white lupin is extensively cultivated as a green manure. In Germany, also, it has been found to be one of those plants by which unfruitful sandy soils may be most speedily brought into a productive state. The superiority of this plant for the purpose of enriching the soil depends upon its deep roots, which descend more than two feet beneath the surface—upon its being little injured by drought, and little liable to be attacked by insects—on its rapid growth—and upon its large produce in leaves and stems. Even in the north of Germany it is said to yield, in three and a-half to four months, 10 to 12 tons of green herbage. It grows in all soils except such as are marly and calcareous, is especially partial to such as have a ferruginous subsoil, and besides enriching, also opens stiff clay by its strong stems and roots.

3. *The Vetch* is inferior in many of its qualities to the white lupin—yet in southern Germany it is often sown on the stubble, and plowed in after it has been touched with the frost, and has begun to decay In England also the winter tare plowed in early in spring has been found highly advantageous. It is a more precarious, however, and a more expensive crop than either of the former, and requires a better soil for its successful growth.

Buck wheat is also too uncertain a crop, and the high price of its seed renders it inferior in value to spurry on sandy soils. It is superior to this latter plant, however, on poor heaths. In southern Germany it is sown on the stubble and plowed in when it is 18 or 20 inches high,

Rape can only be sown upon a soil which is already in some measure rich, but it has the advantage of continuing to grow very late in the autumn, and of beginning again very early in spring. It sends down deep roots also, and loosens clayey soils by its thick stems. In the light soils of Alsace it is sown after early peas and pota-

toes, and manures the land for the succeeding crop of wheat or rye.

Rye is pronounced by Von Voght to be the best of all green manures for sandy soils, but it is also the most expensive. It is a very sure crop and begins to grow very early in the spring, but it is not deep rooted. It has been used with advantage in northern Italy and in Germany.

Turnips have been sown in Sussex with good effect as a stubble crop for plowing in in spring, and in Norfolk and elsewhere the portions of the turnip bulbs which are left when they are eaten off by sheep contribute, when plowed in, to enrich the land for the barley that is to follow. Turnip tops are in many places plowed in with much benefit to the land. Potatoe tops also might be dug or plowed in with equal advantage.

Borage has been strongly recommended in Germany, and especially by Lampadius. It is stated by this experimenter that borage draws from the air ten times as much of the elements of its organic matter as it does from the soil, and that therefore it is admirably fitted for enriching the land on which it grows.

Red Clover is often plowed in as a manure. On the Rhine it is sown for this purpose, being plowed in before it begins to flower. In French Flanders two crops of clover are cut, and the third plowed in, and in some parts of the United States, the clover which alternates with the wheat crop is plowed in as the only manure. White clover is not so valuable for this purpose, for neither is it so deep rooted nor does it yield so large a crop of stems and leavas.

Old Grass.—Perhaps the most common form of green manuring practised in this country is that of plowing up grass lands of various ages. The green matter of the sods serves to manure the after crop, and renders the soil capable of yielding a richer return at a smaller expense of manure artificially added.

In regard to all these forms of green manuring, it is to be observed that they enrich the soil generally, and are therefore well fitted to prepare it for after-crops of corn; they will not fit it, however, for a special crop, such as turnips, which requires to be unnaturally forced or pushed forward at a particular period of its growth.

Will green manuring alone prevent land from becoming exhausted?

If by green manuring is meant the growing of vegetable matter upon one field, and plowing it in green into another, as is sometimes done, it may be safely said that, when judiciously practised,land may by this single process be secured for an indefinite period against exhaustion. But if we plow in only what the land itself produces, and carry off occasional crops of corn, the time will ultimately come when any soil thns treated will cease to yield remunerating crops. A brief consideration of th subject will satisfy you of this.

Suppose a loose sand to be improved by repeatedly sowing and plowing in crops of spurry or white lupins, [or clover,] the green leaves and stems fix the floating elements of the atmosphere, and enrich the soil with organic matter, while the roots, more or less deep, bring up saline matters to the surface, and thus supply to the plant what is no less necessary to its healthty growth.—But the rains yearly wash away from the surface, and the corn [grain] crops remove a portion of this saline matter. This portion the crops grown for the purpose of green manuring yearly renew by fresh supplies from beneath But no subsoil contains an exhaustible store of those saline substances which plants require. Hence, though by skillful green manuring waste land may be brought to a remunerative state of fertility, it will finall relapse again into a state of nature, if no other methods are subsequently adopted for maintaining its productiveness.—The process may be a slow one, and practical men may be unwilling to believe in the possibility of a result which does not exhibit itself within the currency of a single lease, or during a single lifetime—yet few things are more certain that *in general* the soil must sooner or later receive supplies of *saline* manure in one form or other, or else must ultimately become unproductive. It may be considered as a proof of this fact that, in all densely peopled countries in which agriculture has been skillfully prosecuted, the manufacturing of such manures has become an important branch of business, giving employment to many hands, and affording an investment of of much capital.

In the practical adoption of green manuring, it is of importance to bear in mind—

1. That a sufficient quantity of seed must be sown to keep the ground well covered, one of the attendant advantages of stubble crops being that they keep the land clean and prevent it from becoming a prey of weeds.

2. That the plants ought to be mown or harrowed, and at once plowed in before they come into full flower. The flower-leaves give off nitrogen into the air, and as this elemeet is supposed especially to promote the growth of plants, it is desirable to retain as much of it in the plant and soil as possible. Another reason is that, if allowed to ripen, some of the seed may be shed and afterwards infest the land with weeds.

3. That they should be plowed to the debth of 3 or 4 inches only, that they may be covered sufficiently to prevent waste, and yet be within reach of the air, and of the early roots of the succeeding crop.

The Moon and the Weather.

A Table showing the exact character and changes of the weather, at Cincinnati, for the past three months, and the changes of the moon for the same time.

Day of the week.	Mean Temperatr.	Mean of Barometer.	Winds.	The Weather.	Rain guage.	Moon's changes.
Oct'r 1	63.8	29.[illegible]70	s w	variable	.08	
2	55.0	.214	w	cloudy		
3	58.7	.282	s	variable		
4	59.5	.299	s w	do		Full.
5	58.3	.439	w	fair		
6	63.3	.405	s w	do		
7	67.2	.464	do	variable		
8	66.8	.568	do	fair		
9	[illegible]6.8	.571	w	do		
10	59.7	.588	n	variable		
11	[illegible]2.5	.459	n e	do		3d qr.
12	63.3	.329	s	do		
13	51.3	28.913	n w	do		
14	48.5	29.[illegible]71	w	do		
15	51.8	.263	do	do		
16	62.7	.183	s w	fair		
17	39.3	.344	n w	cloudy	1.54	
18	40.3	.416	n	variable		
19	42.7	.474	w	fair		
20	4[illegible].0	.472	s w	do		New.
21	41.6	.587	w	do		
22	44.2	.421	s w	variable		
23	47.7	.377	w	clear		
24	48.3	.321	do	do		
25	53.0	.4[illegible]4	s w	fair		
26	62.3	.415	do	do	.15	
27	48.8	.264	w	variable		1st qr.
28	38.3	.563	n	clear		
29	42.7	.458	do	do		
30	45.5	.505	do	cloudy	.16	
31	43.5	.343	n e	do		
Nov. 1	49.0	29.234	n	cloudy	.91	
2	49.0	.317	w	do		
3	51.3	.439	do	do		Full.
4	48.[illegible]	.679	n	variable		
5	47.7	.612	do	clear		
6	53.8	.359	n e	do		
7	56.2	.258	do	variable		
8	58.8	.[illegible]53	do	cloudy		
9	62.2	.323	do	fair	.11	
10	60.2	.257	s e	variable		3d qr.
11	56.[illegible]	.475	w	cloudy		
12	54.5	.485	n	do		
13	53.2	.305	e	do		
14	44.3	.284	s w	fair		
15	37.8	.44[illegible]	w	cloudy		
16	48.3	.468	n w	do		
17	53.3	.240	s w	variable		
18	44.3	.387	s w	cloudy	1.23	New.
19	38.7	.00[illegible]	w	do	.34	
20	38.2	.377	w	do		
21	46.8	.141	s w	variable	.38	
22	35.[illegible]	.055	w	do		
23	4[illegible].2	.376	s w	do		
24	37.0	.096	s w	cloudy	1.01	
25	26.5	28.916	w	do	.28	1st qr.
26	19.8	29.428	w	variable		
27	34.7	.125	s	cloudy		
28	46.0	.310	s [illegible]	variable		
29	38.8	.593	w	fair		
30	39.8	.709	do	fair		
Dec. 1	49.3	29.333	e	cloudy	.85	
2	44.2	.085	s w	do	.92	Full.
3	35.2	.441	w	fair		
4	36.0	.6[illegible]5	do	do		
5	43.7	.618	do	variable	.05	
6	46.8	.462	s	cloudy	1.91	
7	57.7	.11[illegible]	s w	do	91	
8	38.0	.00[illegible]	n	do	1.02	
9	37.5	.262	n e	do		
10	3[illegible].3	.057	s w	do		3d qr.
11	32.5	.515	w	fair		
12	28.7	.543	w	clear		
13	34.0	.501	w	fair		
14	31.3	.559	n e	variable		
15	31.2	.563	do	do		
16	33.2	.[illegible]27	e	cloudy	.23	
17	34.[illegible]	.041	n	fair		
18	32.2	28.941	n w	cloudy	.11	New.
19	25.[illegible]	29.231	w	do		
20	28.5	.4[illegible]0	w	variable		
21	37.5	.482	s w	fair		
22	30.5	.786	w	do		
23	32.7	.828	do	do		
24	45.0	.452	do	cloudy		
25	4[illegible].0	.306	do	fair		1st qr.
26	44.0	.533	do	do		
27	6[illegible].7	.015	s w	cloudy		
28	49.3	.[illegible]46	s w	variable		
29	51.2	.160	e	variable	.51	
30	46.[illegible]	.25[illegible]	s w	cloudy	1.41	
31	62.5	.[illegible]32	s	do	1.33	

Explanation.—The 1st column gives the day of the month; the 2d the average temperature of each day, by Fahrenheit's thermometer; 3d, the average height of barometer; 4th, the directions of winds; 5th, the weather as to clouds; 6th, the depth of rain, in inches or parts of an inch; 7th, the changes of the moon. (*Note.* This table, with the exception of the 7th column, is compiled from a record kept at Woodward College, Cincinnati, by Dr. Joseph Ray, and published at the close of each month in the Cin. Chronicle.)

Does the Moon influence the Weather? This is the question in dispute; and now we have given above a table of *facts*, from which our readers can draw their own inferences. We may give tables of this kind once every three months for the year to come; and we will venture predict that few, if any of them, will prove more favorable to the moon advocates than the foregoing.

But what does the table show? Why first of all, it shows conclusively to our mind, that the moon has nothing to do with the changes of the weather. It is true, at the new moon in November, there was a heavy rain, and it continued rainy for a week afterwards; but no such results are shown in either of the other months. In October it was dry for three days before the new moon, and continued so for four days afterwards; and in December a very little rain fell on the day of new moon, and none the day previous, or for ten days afterwards. Then as to the Full of the moon, it will be seen that no rain fell, or change took place on or near the day, except in one month of the three, and then only a slight fall of rain on the day of the change and the one preceding. The same general remarks will apply to the 1st and 3d quarters of the moon; and also to any other particular periods that may be named in the several months—and for several *years* the result has been and ever will be found the same; and yet probably more than one half of the community, especially farmers, will continue to believe that the changes of the moon in some way or other produce changes of the weather.

Useful Recipes.

To make "King Oil."—Take 1 oz. green copperas, 2 oz. white vitriol, 2 oz. common salt, 2 oz. linseed oil, 8 oz. molasses, and 1 pint urine; boil for 15 minutes over a slow fire, and when nearly cold, add 1 oz. oil vitriol and 4 oz. spirits turpentine—apply with a feather. This application I have tried on several severe wounds on horses, in very cold weather, with the best results. If applied early, it will keep out all cold, and cause the wound to supperate and heal soon. (It need not be bandaged.)

Liquid Opodeldoc, for bruises and sprains on horses, and for pains and rheumatism on myself.—Take 1 quart whiskey, and dissolve in it 6 oz. castile soap, heating it over a slow fire till it is completely incorporated; then let it cool, and add 1 oz. of camphor.

I found the foregoing recipes in an agricultural paper some years ago, and having tried them effectually, can recommend them to others. If inserted in thy paper, I think some of thy subscribers may be led to say, as I have done, "this recipe has been worth more to me than the whole cost of the paper for a year."

Green Hill, Col. Co., O. R. H. G.

Practice vs Precept.

When the King of Sparta was asked, what things he thought proper for boys to learn, he answered, "Those things which they expect to do when they are men."—The history of that nation proves, that they practiced upon this precept, for as their government was upheld by physical power in a great measure, they according educated their boys in schools, where they practiced all kinds of gymnastic exercises; and they were also well instructed in the science of war. Hence we find that the Spartans were a nation remarkable for their great powers of endurance, and powerful exploits in war.

But how is it with us—a people professing to believe that the perpetuity and prosperity of our nation depends upon the moral intelligence and industry of all classes in society; and that the grand edifice of our National Republic, is mainly upheld by the chief corner stone,—Agriculture!

Do we practice upon that precept, that "upon Agriculture, the foundation of individual happiness, and national prosperity rely for support?" Are we educating and instructing our boys in "those things which they expect to do when they are men?" Yes says one—when we wish to prepare a boy for the occupation of a Carpenter, a Blacksmith, a Tailor or any other mechanical occupation, we send him to a common school to learn some of the primary branches of an English education, and then put him under the instruction of some skillful mechanic, to study and practice his occupation, for two, four, or six years. Or when we wish to educate and prepare a boy for one of the professions,—Law, Physic or Divinity, —we have him spend some six or eight years in studynig

the various sciences necessary to prepare him for the practice of his professson. But the question might be asked, are you equally systematic and consistent, in preparing boys for the occupation of a farmer,—that occupation "upon which individual happiness and national prosperity must rely for support?" Or do you neglect your duty and act inconsistently, by letting your farming boys grow up uninstructed in the sciences necessary to properly qualify them for their occupation? Yes, answers the half cultivated farms from various parts of our country. Yes, answers numerous herds of indifferent looking, half-fed horses, cattle, hogs, sheep, in all parts of our land. Then are we not disregarding and neglecting the precepts or sayings of the great father—Washington, who said he "*knew of no pursuit, in which more real and important services could be rendered in any country, by improving its Agriculture.*" But stop! says one, it is not necessary that a farmer should be as well educated as a mechanic, or gentleman of profession. Well let us examine.

Is not a general knowledge of Natural Philosiphy indispensable to the farmer, in order that he may understand mechanics and some other departments of the science—a knowledge of which he makes an almost daily use in pursuing his occupation? Is it not necessary that he should understand Chemistry, in order that he may change the nature of the soils, by wisely mixing the manures with the different earths, to increase their fertility —that he may understand the physiology of plants in order to know how they receive their nourishment from the earth, and air—that he may assist nature in her nice operations? Should he not understand Geology, in order to know the nature of the different soils, which are mostly made up of pulverised rocks—for by knowing the location and nature of the rocks in the neighborhood he may form a correct opinion of the quality and properties of the soil, and judge how far it may be influenced by the drought and heavy rains. Should he not understand Mineralogy to enable him to discover and properly appreciate the various beds of lime, marl and plaster, which if properly applied would make many a farm teem with exuberant crops and grains, grasses and fruits, instead of remaining in almost barren waste? Is it not highly necessary that he should study the nature and quality of the various grasses in order to cultivate some one or more of the various species which may best suit the quality and situation of his soil? And should he not be qualified to select such grains for cultivation as are best suited to the quality of his soil—recollecting that each kind of grain requires a particular kind of food, and that a soil well adapted to the production of one kind of grain, may contain but little nourishment for some other kinds? And after considering these facts, does it not seem necessary, that he should understand the food of the different grains, grasses and roots, and qualities of the different soils, in order to make a wise adaptation of grains, &c., to soils, and to the proper rotation of crops on a given soil? Is it not necessary, that he should understand and select, the best stock of horses for the farm, or for market—Should he not know what breeds of cattle are best for the stall, and what for the dairy? Should he not know what breed of sheep to raise for their fleece, and what for the butcher—taking into account the hardiness &c., of each kind? Should he not know what breed of hogs, will soonest be fit for market,—make the greatest quantity of pork, and use the least quantity of grain, fruit or roots? Should he not be well informed with regard to proper kinds, quantity and quality, of grains or roots, suitable for the food of the different kinds of animals on his farm &c., &c.? And should he not know enough about Agriculture, to build, or superintend the building, of a suitable farm house, barn, and other out houses, suited to the size and situation of his farm? And if a knowledge of these things is necessary, in order that a farmer may pursue his occupation with success and profit, (and I presume no one who reflects upon the subject for one moment, will doubt it,) is it not highly necessary, that we should be as particular, and systematic, in educating and instructing our boys for the occupation of Farmers, as for Mechanics, Lawyers, or Physicians, or as the Spartans were in preparing their boys for warriors? And is it not time, and high time too; that every Farmer in our country, should reflect upon these points, and act as common sense directs.?

C****

Fincastle, Brown Co., O.

Coal Tar for Fruit Trees.

From the Horticulturist.

We have recommended the coal tar of the gasworks to be applied to the trunks of fruit trees in winter, to protect them against mice and rabbits. In England this substance is very extensively used for this purpose and we have also seen it used for two seasons on my trees, with perfect success.

In two instances, however, which h ve come under our notice, where it has been applied to very young trees, and been suffered to remain during the succeedieg spring, it has had decidedly injurious effect upon the trees.

We have taken pains to examine the coal-tar used in one of these cases, and find that it is very concentrated in strength, at least twice as strong as that generally made. Indeed, we believe it is such as is made and sold for coal-tar paint, and is so caustic as to be fatal to young and tender barked trees.

As it is difficult to give any ready test, by which those not familiar with coal tar may judge if it is strong or weak, we feel bound to caution orchardists against using the pure article as obtained from the city gas-works, unless they know it to be a weak solution. If they have any doubts about it, the safest course is to dilute it with one half milk before applying it to the trees.

If any of our readers have already used coal-tar on their trees, which they have reason to fear may be of the powerful kind alluded to, we would advise them to remove the same thoroughly from the trees with soap and a hard brush, as soon as the spring opens, and before the sap begins to move. It will not be likely to prove injurious so long as the tree is in a dormant state.

On Plowing land for Wheat.—I will here state an experiment which I accidentally tried. In the fall of 1845 a field of 6 acres stubble, was manured and plowed for wheat the last of 8th mo., (Oct.) except one land which owing to my absence from home was not plowed till 10 days later. The whole was then sown in wheat, and harrowed in. On the land last plowed, full one third more wheat came up, than on the land next adjoining, though there was no difference in seeding, and it grew more rankly, so that at harvest it nearly all fell down and had to be reaped with a sickle. There was no difference in the soil or the manuring—then what made the difference in the growth of the crop? if it was not simply its being sown immediately after plowing. My opinion is, that the sooner the seed is sown after plowing, the better.

Simeon Fawcett.

Columbiana Co. O.

English Horse--Inquiry.

Mr. Bateham—A friend of mine coming from England to Ohio, has a three-year old colt, of a superior breed. which has taken two prizes at agricultural shows in England, and which he feels unwilling to part with. He wishes me to inform him whether such a horse will be of advantage in this country, if he brings it with him; and as you are probably more familiar with such matters than I am, perhaps you will give your opinion on the subject in the Cultivator. S. W. L.

Belmont Co., O.

Answer.—If the colt is of a breed that would be likely to improve the stock of horses in this country, we say, bring him on, by all means. For this purpose, we think he should not be of the *racing* nor the *dray horse* breed, but such as are most fit for "all work"—combining as much *speed* as possible, with *strength* and power of *endurance.*—Ed.

Laboring too Much.

The following remarks from the Boston Medical Journal, contains suggestions worthy the consideration of some farmers that we know of in Ohio, as well as the people of New England:—

"People do not have relaxation enough in New England. They too generally have a care-worn expression, from infancy to age; and the fact cannot be denied, that anxiety is weariness to the flesh. We are all utilitarians in this country, especially in the northern States, hardly affording ourselves opportunity for eating or sleeping in the manner which nature demands—for she can only conduct her chemical operations properly, and readjust the deranged vital machinery, while we are quietly slumbering. We recruit ourselves and grow fat during a refreshing nap—but exhaust the system, both physically, and mentally, in pursuing to excess the ordinary round of every-day business. 'All work and no play makes Jack a dull boy,' is a proverb based on a profound knowledge of the laws of our being.

Females, in New England, are worse off than the other sex in the deprivation of out-of-door relaxation as custom has made it vulgar to breathe the fresh air of heaven, unless it is done in a very lady-like manner.—Hence they make feeble mothers—look thin, sallow, lank, and die by thousands, prematurely, of diseases that never would have been developed had there been less education of the mind, and more of the body, in girlhood.

A sad mistake is produced by a too implicit belief in the adage that "time is money," since the first object of pursuit is in consequence, made to be cash. Those who attempt to rest reasonably from their labors, at proper periods, are either afraid of not having enough, or are perpetually reminded that idleness ends in want. So the shuttle flies faster than it ought to go; the farmer cheats himself out of all that is worth having, health, by denying himself and his boys a holiday, because time is money and example is everything; merchants in cites toil for the immediate benefit of thieves and paupers—paying taxes in proportion to their income—and leave the world unsatisfied, having never found themselves ready to rest and take comfort. We work too much and too long in New England.

☞No news from England since our last. The steamers only arrive monthly during winter.

The Markets.

There is scarcely any change worthy of notice in the Markets of late; nor is it likely there will be any of consequence, until the nearer approach of spring.

Cincinnati, *Jan.* 13.—*Hogs* have continued to advance slowly in price. The season is now nearly over. Sales have been made the last week at $3,50 @ 3,75 to 3,80, and even $4, for some of extra quality.—*Flour*—receipts very light, owing to damages to canals by the flood—prices, $3,75 @ 3,90, ℔ bbl. Wheat brings 60 cts; Corn 22 @ 24; Oats 23 @ 25; rye 42 @ 44; barley 45 @ 48 cts; Small white beans $1 ℔ bu. Dried peaches, $1,20 @ 1,25 ℔ bu.; apples 62½ cts. Cranberries, $4 @ $5 ℔ bbl. Butter is scarce, good rolls bring 10 @ 12½ cts, best do, at retail, 18 @ 20 cts. ℔ lb. Cheese for shipment, 6½ @ 6¾ cts.

Baltimore Cattle Market, Jan. 8.—The supply of Beef Cattle at the scales this week was not large. and the demand less active, with a slight decline in prices. Of 400 head offered, 300 were sold at prices ranging from $2,50 to $3,50 ℔ 100 lb. equal to $4 @ 6,75 net. The average rate was about $3 gross. Sales of at $5 @ 5,12½.

COLUMBUS PRODUCE MARKET.

Corrected for the Ohio Cultivator, Jan. 14.

GRAIN.				Honey, strained	12½	@	14
Wheat, ℔ bu.,	55	@		POULTRY.			
Indian corn,	18	@	20	Turkeys, each,	37	@	44
Oats,	14	@	15	Geese, "	18	@	20
PROVISIONS.				Ducks. "	10	@	12½
Flour, retail, bbl,	3,75	@	4,00	Chickens, "	8	@	10
" 100 lbs	2,00	@		SUNDRIES.			
" Buckwheat.	2,00	@		Apples, bu.	37½	@	50
Indian meal, bu	25	@		" dried,	50	@	
Hominny, quart,	3	@		Peaches, dried,	1,37	@	1,50
Beef, hd qr.		@		Potatoes,	20	@	25
" 100 lbs.,	2,50	@		" Sweet,	75	@	1,00
" fore qr.,	2,00	@		White beans ℔ bu	75	@	1,00
Pork, mess, bbl.	8,00	@		Hay, ton,	4,00	@	5,00
Hogs. ℔ 100 lbs,	2,25	@	2,50	Wood, hard c,rd	1,75	@	2,00
Hams, country lb,	5	@	6	Salt, bbl.,	1,87	@	2,00
" city cured,	7	@		SEEDS.			
Lard, lb., rt.,	5½	@	6½	Clover, bu.,	3,00	@	
" in kegs or bls.	5	@		Timothy,	1,00	@	1,50
Butter, best rolls,	10	@	12½	Flax,	75	@	
" common,	8	@	9	ASHES			
" in kegs,	7	@		Pot, 100 lbs ,	2,75	@	3,00
Cheese,	6½	@		Pearl,	3,00	@	3,50
Eggs, dozen,	12	@		Wool, common,	18	@	20
Maple sugar, lb.		@		" half bl'd,	20	@	23
" molasses, gal.		@		" full bl'd.		@	
Honey comb, lb,	10	@	12½				

☞Short Advertisements, suited to the agricultural character of this paper, will be inserted at the rate of six cents per line, for the first and three cents for each subsequent insertion.

An Excellent Farm for Sale.

In Perry township Franklin, county Ohio, 2 miles northwest of Dublin, on the east bank of the Scioto river; 15 miles from the capitol of the State of Ohio; containing 175 acres, of which there is about 75 under cultivation, and well fenced in several fields. Two orchards of bearing fruit trees, one sugar orchard, a good double log house. and a large new barn, and the land of the very best quality of warm and generous soil, well adapted to the cultivation of all kinds of grain, grass, &c. There are two valuable springs on the premises, one near the house equal to any in the country, and the location for a residence is as *pleasant* and *healthy* as any in the State.

The farm will be sold very low for cash, or part cash, and the residue on credit. If desired, it can be divided into two tracts, and sold separately. Title indisputable. For the price and terms. apply to the subscriber at his office in Columbus.

3t. S. BRUSH.

Dr. O. Reynold's Patent Beehive.—The cheapest and Best:—Doctor Potter who is disposing of rights in Ohio and elsewhere, passed through Columbus yesterday expecting to return the 20th inst., and put up at the Neil-house, where he will be happy to explain some of the advantages of Reynolds' hive over every other hive now in use.

Dutch Bulbs, Flower roots, &c.

A full assortment of Bulbs and other Flower roots, imported this season, direct from Harlem (Holland,) consisting in part o double and single Hyacinths in great variety, and of all colors; double single and parrot Tulips, Polyanthus Narcissus in variety; double single and sweet scented Jonquils, Crown Imperials in variety. yellow, blue, white, gold and silver Crocus, Amaryllis, Iris, Ranunculus. Anemones and Gladiolus in variety; scarlet, martagon, Lillies, double and single Snow-drops, Tuberoses, Tigridas, &c. &c.—For sale at the Seed Store east fifth street, near the Dennison House, Cincinnati. H. HUXLEY,

N. H. TAYLOR, having returned to Columbus, is prepared to attend to orders in the line of his profession. Room over Pinney and Lampson's store, 2d story. Refers to the Editor of the Cultivator. *Jan. 1st.*, 1847.